Exhibit Y

Redacted

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

- -

Michelle Simha, as Trustee for the Next-of-Kin of Noah Leopold,

Plaintiff,

Civil File No. 24-CV-01097-JRT-DTS

vs.

Mayo Clinic,

Defendant.

- -

DEPOSITION OF GUSTAVO KNOP

Volume I, Pages 1 - 97

August 14, 2024

(The following is the deposition of Gustavo Knop, taken pursuant to Notice of Taking Deposition, via video, at Mayo Clinic, Legal Department, 100 2nd Street SW, Rochester, Minnesota, commencing at approximately 9:04 a.m., August 14, 2024.)

APPEARANCES:
On Behalf of the Plaintiff:
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On Behalf of the Defendant:

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ALSO PRESENT:

Ron Huber, Videographer
Anna C. Messerly, Ciresi Conlin
Maggie Palmisano, Ciresi Conlin (via Zoom)
Michelle Simha (via Zoom)
Norman Leopold (via Zoom)
Karen Leopold (via Zoom)
Jenna Shulman (via Zoom)

EXAMINATION INDEX

PROCEEDINGS

THE VIDEOGRAPHER: Good morning. We are on the record. Today is August 14th, 2024. The time is 9:04 a.m. Today's case -- case caption is Simha versus Mayo Clinic. The witness for today's deposition is Gustavo Knop.

At this time the attorneys for the various parties will introduce themselves and the court reporter will swear the witness.

MR. THOMPSON: Brandon Thompson along with Anna Messerly for the plaintiff. And on the Zoom is Karen Leopold, Norman Leopold, Jenna Leopold Shulman, Michelle Simha, and then Bibeane Metsch-Garcia and Maggie Palmisano, both from my office.

MR. BRANTINGHAM: Andrew Brantingham on behalf of defendant and the witness.

(Witness sworn.)

GUSTAVO KNOP,

called as a witness, being first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. THOMPSON:

Q. Good morning, doctor.

A. Good morning.

Q. Have you ever had a deposition taken before?

A. No.

Q. Okay. So this is a process where we're just trying to figure out some things that you know, both about some general medical concepts that are relevant to this case and the facts of the case that we're talking about. Okay?

A. Perfect.

Q. You understand that?

A. I do.

Q. All right. Do you remember this OCS run?

A. Yes, I do.

Q. All right. Do you have like a lot of memories of it or just some vague recollections?

A. I should say most of the memories, but probably not all.

Q. Fair enough. All right. We'll get into those in just a minute, but that's good to know. It helps me kind of direct where we're going with the deposition.

A. Right.

Q. Tell me --

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Well I'm not going to ask you to tell me about your practice history, because in looking at your CV it looks like you've practiced in a lot of hospitals kind of all over the world. Is that right?

A. Yes, I did.

Q. For how long have you worked at Mayo?

A. I started January '22.

Q. What brought you to Mayo?

A. Mayo was increasing the transplant activity and they wanted to recruit people on the trans -- on the procurement side to have more expert people working on -- on that activity, especially on the development of the new techniques regarding DCD hearts and the use of OCS and other practices.

Q. And that's something that you do have some expertise in it looks like?

A. Yes. I did have quite a -- I should say significant expertise on that.

Q. Let's talk specifically about OCS.

What was your experience with OCS before you came to Mayo in 2022?

A. I was in a --

I -- I did a fellowship in

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transplantation Papworth Hospital. Papworth Hospital was a pioneer developing DCD hearts in the world. Despite they were not the first, they were -- they -- the first on high numbers and the second to do that all over the world regarding OCS and DCD hearts.

Q. You're using both OCS and DCD. Am I understanding you correctly if I say Pap --

Papworth?

A. Yes.

Q. -- was a pioneer in using the OCS Heart System in order to transplant DCD hearts?

A. Was pioneer in DCD hearts in this research and clinical practice. OCS was part of that. Is not the target is OCS and the target is DCD heart transplantation. OCS was a part of that, the tools we had to do that.

Q. The goal was to see if we can expand the available donor pool by taking DCD hearts, and OCS was one of the tools that were potentially available to make that a reality. Fair?

A. Exactly. But -- but OCS was previously used, especially in UK where I was working and especially in another hospital in London,

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Harefield, quite -- in quite a number of cases, also in Papworth, for DBD cases to prove that they are at least non-inferiority compared to cold storage, and from there move on to demonstrate that it can be used and expanded on and our pools -- this expanded time of protection, which is the weak Achilles point of the cold storage.

Q. Understood.

If I am understanding your testimony, you think OCS is a pretty incredible piece of technology.

A. I shouldn't call incredible, but it's very helpful.

Q. In your experience with OCS, you of course know that there are a number of risks that are particular to the use of the OCS.

A. There are always risks in medicine. OCS is not the exception.

Q. No, I understand that. I'm not talking about just general risks that apply to just anything in medicine. I'm talking about specific risks that are specific to the use of the OCS. You know that there are such risks; right?

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A. I do know there are risk in instrumentation if you don't do it well. There are risks in management if you don't follow the common judgment and guidelines, both combined. And, yes, of course there are risks.

Q. You're familiar with the research that says that sometimes hearts that are transported on OCS suffer myocardial damage that really can't be explained; right?

A. You mean publications about that?

Q. Sure.

A. Yeah, it is possible.

Q. It's not just possible, that is one of the things that the researchers who have published on OCS have specifically published; right?

A. As I said, there are always un -- un -- unwanted effects on the use of any device, any, any device, so OCS is not the exception.

Q. I appreciate that, but I want to stick with the questions that I'm asking. And I'm not asking you about risks associated with any device, I'm talking about one specific risk with respect to one specific device.

A. Yeah.

Q. My question was: Are you aware of the fact that the researchers who have published on the OCS have published that some of the hearts that are transported on that machine suffer unexplained myocardial damage?

MR. BRANTINGHAM: Object to the form.

A. Yes, I am aware. But that is related to other issues, not -- for example, a long, long run on the OCS, many hours. The more time on the OCS the heart is, obviously the possibility of damage of the heart.

Q. So the manufacturer of the OCS and the researchers who have published on this have written that that myocardial damage cannot be explained, but you're telling me that you have the explanation for it.

MR. BRANTINGHAM: Object to the form of the question.

A. No, I didn't say that.

MR. BRANTINGHAM: Just, doctor, take one second so I can get an objection out and then you can go ahead. I'm going to object to the form of the question. You can go ahead.

A. I didn't say that.

Sorry. Repeat the question.

Q. Yeah. I asked you whether you understood that the researchers published that there was myocardial damage that happened for unknown reasons. You said, yes, but it was because of other factors like a very long OCS run. Did I understand you correctly?

A. Yes. I made the clarification that myocardial damage can occur, but it is related to other issues that may happen during the transport and the time.

Q. Do you think that's what the researchers published in the EXPAND study?

A. I am not aware of the details, and that is what I have in my experience.

Q. So in your experience, how many hearts on a long OCS run have suffered significant myocardial damage?

A. I should say very few, but in very long runs.

Q. How long?

A. Between six and --

More than six hours on the machine.

Q. Are these runs that were done at Mayo?

A. I can't recall any with that.

Q. Give me your best estimate as to how

many OCS runs you personally have been on.

A. In -- including UK?

Q. Ever. Yeah, in your career.

A. Yeah. Should be more than 50.

Q. Less than 75?

A. Yes.

Q. So somewhere between 50 and 75.

A. Possibly.

Q. What's your best estimate as to how many runs you've been on since coming to Mayo in 2022?

A. I can't say accurate, but probably more than 30.

Q. What is the longest OCS run you can recall going on ever in your career?

A. About eight hours.

Q. When you were working in the UK, how far would you travel to get an OCS heart? What's the farthest place you can remember going?

A. Not far. Usually the distance were short, but on ground.

Q. Understood.

A. Not flying.

Q. Understood.

What is the longest OCS run you can recall going on since you've been at Mayo?

A. About six hours maybe. I can't say exactly. You are asking me questions I don't have the list, whatever.

Q. Yeah.

A. I'm just replying based on what my memory gives me just now.

Q. Totally understand.

Do you remember, location-wise, where that farthest trip would have been?

A. No, I don't.

Q. Do you have a list that you maintain of all the OCS runs you've been on?

A. Not me. The people who re -- who takes all that information, so I am ready -- I can ask that at any time --

Q. Sure.

A. -- if I need.

Q. Sure.

Has there ever been a time since you've been at Mayo, that you can recall, where a heart that was transported on OCS was ultimately discarded and not transplanted?

A. And not transplanted you mean?

Q. Yes.
A. Not in my cases.
Q. In other cases that you're aware of at Mayo?
A. I don't recall any.
Q. Okay. You know --
A. There may be. I don't recall.
Q. Yeah. And you know that in the EXPAND study, almost one out of every five hearts that was transported on the OCS was discarded and not transplanted; right?
MR. BRANTINGHAM: Foundation. You can answer.
THE WITNESS: I can answer, yes.
A. That study probably was done in the early stages of the research -- of the use of OCS.
Q. My question was: Are you aware that in the study one out of every five hearts was discarded without being transplanted?
A. I'm not aware in detail of that information, but I accept that may be the --
Q. Yeah.
A. -- the issue because you are -- you are saying that.

Q. On the OCS runs you've been on at Mayo, do you have the ability to communicate with Mayo while you're on the airplane?
A. While on the airplane, no.
Q. For this case, do you remember whether it was you or Dr. Altarabsheh who called back to Mayo after doing the initial assessment of the donor heart in Idaho?
A. Usually the first person in charge, in other words the first surgeon --
There are two surgeons going. One is primary and the other one is assistant. On this occasion, I was the assistant.
Q. Yep.
A. Because we rotate. Not for any kind of other reason.
Q. Sure.
A. On this occasion communication may have been done by my colleague, not me, because this -- the assistant usually -- usually do not communicate with the base for practical and -- purposes and because the primary is the person who deals with that.
Q. Would I be correct in assuming, based on your testimony, that you do not remember

anything about the communication back to Mayo while you were in Idaho before leaving?
A. I don't remember, but I -- what I can tell you that the usual procedure, typically, are the first surgeon, the main surgeon, does communicate with the base regarding what is the assessment of the heart, which is the crucial work we do there --
Q. Yep.
A. -- before going for the next steps.
Q. Understood.
So probably what happened is that Dr. Altarabsheh communicated back to Mayo; right?
A. I assume that is the most probably thing that happened.
Q. But you don't have any memory of that whatsoever; correct?
A. I don't have that.
Q. Okay. Do you have any memory of assessing this heart in Idaho?
A. Yes, I do --
Q. You do.
A. -- have memory.
Q. Okay. Tell me what your memory is.
A. The heart on this case looked to us

absolutely a -- a good heart like we call it. There were no abnormalities that we have seen there in the donor site, meaning we assess different aspects of the heart, and after doing a meticulous assessment we take our decision of what is -- what we are going to inform to the base, basically how is the contractility, what are the -- what is the -- what are the filling pressures based on palpation, based on visual assessment, what are the coronary artery aspects, any lesions or any plaques or whatever, and what is the previous hemoglobin of the donor, which is a very important point for the OCS, and what is the situation we are, you know, experimenting in the dissection with the abdominal team if there is any significant blood loss or any problems. All those things we assess.
Q. And so I understand that those are all things that you regularly would assess. Is it your testimony that you actually remember doing that in this case?
A. I actually remember on this case that the heart looked, to me, independently what looks to my colleague -- I was there and I am

also responsible as he is -- that this heart was adequate and good for transplantation.

Q. All right. So --

A. For use -- not transplanting -- for retrieving and then using in a recipient.

Q. Sure. So that was about a year ago; right?

A. Sorry?

Q. It was about a year ago.

A. Yes.

Q. How many OCS runs have you been on in the last year, roughly?

A. Maybe 20, maybe --

Q. All right.

A. -- 15, I don't know.

Q. Fifteen to 20 since then.

Can you remember all the hearts that you've gone and retrieved since this one a year ago?

A. I remember most of them, yes.

Q. Okay. So let's go back to this one that you remember from a year ago. What did --

Were the other surgeons from that hospital in the operating room when you procured the heart?

A. Yes, I think so.

Q. What did they look like?

A. How they look like?

Q. Yeah. Males, females?

A. No, I can't remember that.

Q. Yeah.

A. I don't pay attention to those.

Q. Yeah. Do you remember who else was on this OCS run with you other than Dr. Altarabsheh?

A. It was Danielle the perfusionist.

Q. Who else?

A. It was Mike, --

Q. Uh-huh.

A. -- the tech.

Q. Okay.

A. And that is our main. And it was Salah, Dr. Salah.

Q. Okay. And that -- that's all you can remember?

A. The persons, yeah. There was another perfusionist, but I -- I can't recall who was that.

Q. Male or female?

A. I can't recall that.

Q. What do you remember, since you have all these memories of this particular heart a year ago, what do you remember about the lungs?

MR. BRANTINGHAM: Object to the form of the question. You can answer.

A. I -- I don't pay attention to lungs in these cases.

Q. Why not?

A. Because I'm not involved in lung procurement if I go for the heart.

Q. If there's a problem with the lungs, wouldn't that be relevant to the question of whether the heart was viable or suitable?

A. If it is a problem with oxygenation, yes. Not with the lungs itself. I'm talking about the function of the lungs at that time. We didn't see any problems on that.

Q. You remember that.

A. Of course. I mean saturation is okay. We didn't have any problem with that.

Q. What --

A. If I should have any problem, I would have recalled very clearly.

Q. What color was this heart?

A. Color?

Q. Yeah.

A. Normal.

Q. What's a normal color?

A. Well it's different colors depending the chamber.

Q. Describe this heart that you remember from a year ago.

A. Okay.

Q. Describe it for me. What did it look like?

A. Yes. No problem.

The ventricles are usually red -- how do you say -- it's not super bright. It's a bit soft red.

Q. Soft red?

A. Yes, something like that.

Q. Red in color? Soft red in color?

A. Soft red, the muscle.

Q. Okay.

A. So I should say normal, as the normal description of the -- of the heart.

Q. I don't know what that means because I'm not a cardiac surgeon. I want you to describe it for me. All you've told me is that the ventricles were soft red in color.

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A. Yes.
Q. What other --
What color were the atria?
A. The atria was -- the right atrium is blue.
Q. Okay.
A. Blue. Strong blue.
Q. Strong blue?
A. I mean sorry about my -- I am -- I don't have the fluency in the description of the colors, but it is -- it's not soft blue, it's more strong blue. Do you understand what I mean?
Q. Yeah. You're describing what a normal heart would look like.
A. Yes.
Q. And you're claiming that not just I'm describing what a normal heart would look like, I can remember in my mind that this is what that heart looked like.
A. Yes.
Q. Okay. What else? What else about the appearance of the heart can you describe for us?
A. Okay. The left atrium is also with a blue color --

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Q. Blue color. Okay. I'm with you.
A. -- in the -- in the -- in the dome, which is the part that you can see.
Q. Uh-huh.
A. You don't see the other parts of the left atria --
Q. Uh-huh.
A. -- except the left outer appendage --
Q. Okay.
A. -- which is, you know, more light in the color.
Q. Uh-huh. Light like what?
A. Light -- I should say --
Q. Like a lighter blue?
A. No. No lighter blue. Lighter pink, to the pink side.
Q. Got it. Okay.
A. And then you see the coronaries and the epicardium and the surface of the heart --
Q. Uh-huh.
A. -- which are -- the color is, I should say, white/gray. White/gray.
Q. Okay.
A. If there are plaques, you see very clearly.

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Q. Uh-huh.
A. There were no plaques here.
The vessels coming out from the heart or reaching the heart, the aorta, the pulmonary artery. The pulmonary artery is yellowish because it has some -- usually some fat around. I have to say that there is fat around the heart usually, which is --
Q. Uh-huh. Where?
A. It is --
Q. Don't just tell me usually. I'm talking about your memory of this specific heart that you claim you remember.
A. Yeah. There is some --
Q. Describe the fat.
A. Yeah. The fat is over the pulmonary artery on the -- and on top of the right ventricular outflow tract and the -- close to the base of the aorta, which is the -- the -- the root, a bit of fat.
Q. A bit --
Did you say a bit of fat?
A. Yes.
Q. Just a bit of fat.
A. Yes, a bit.

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Q. Okay. Not fat like --
A. No.
Q. -- covering the whole heart.
A. No, no, no. Definitely not.
Q. No. Okay.
Let me show you a picture of the heart.
MR. BRANTINGHAM: Does it have a Bates number for the record?
MR. THOMPSON: Let me see. Give me that back a second, doctor.
THE WITNESS: Yeah.
MR. THOMPSON: This is Bates No. 24948.
THE WITNESS: Yes.
Q. Does that look like the heart that you were just describing?
A. This is the picture of what heart?
Q. That's the picture of the heart that you're claiming you remember and --
A. Okay.
Q. -- are claiming was blue -- I think you'd said blue, the atria were blue. Show me where that heart's blue. Show me where that heart has just a bit of fat.
MR. BRANTINGHAM: Object to the form, the multiple questions in a row, and object to

foundation.
MR. THOMPSON: What -- what is the foundation objection? I'm asking him to tell me where the blue is on that heart.
MR. BRANTINGHAM: I don't think you --
MR. THOMPSON: What's -- what's lacking in foundation?
THE WITNESS: Okay.
MR. BRANTINGHAM: I don't think you've established who took this picture, when, where it is.
MR. THOMPSON: It's produced by you.
MR. BRANTINGHAM: I understand.
MR. THOMPSON: By you.
MR. BRANTINGHAM: I know that.
MR. THOMPSON: Yeah, the picture of this heart.
MR. BRANTINGHAM: But you --
I -- I know where it came from in that sense, but you're asking about a picture taken during a period of time.
MR. THOMPSON: Yeah.
MR. BRANTINGHAM: And you haven't asked him when that's from. You haven't -- you haven't established when it was taken, who took

it, and so forth.
Q. Is this --
Does this look --
MR. BRANTINGHAM: That's the foundation objection.
Q. Does this look like the heart that --
MR. THOMPSON: Well that's not an objection to my question at all.
MR. BRANTINGHAM: Okay. Well you asked for the explanation of the foundation objection. That's my explantation. The question -- or the objection to the question was --
MR. THOMPSON: That makes no sense.
MR. BRANTINGHAM: -- you asked him multiple questions. You shouted three -- two or three questions at him. Let him -- just let him answer the question.
Q. Yeah. Okay. I'm going to ask you this question now. Is that, in your testimony under oath, consistent with a normal heart such that you just described?
A. Yes, because on this picture it should be blue, this part, and it's not in the -- in the picture itself, you know. It should be more blue here. Whatever is seen in the picture, it

doesn't reflect reality here.
Q. What's the point of taking a picture of the heart in the operating room at the donor hospital, by the way? That's where this is.
A. Yeah. What's the point?
Q. Yeah. Why do you take a picture of it?
A. To see the -- the size of the heart, the general aspect of the heart, but not analyze exactly the colors because the colors are not real here. I mean I see very clearly that this is not -- this is not the real aspect of the atriums, for example, the right atrium, you know.
Q. Does that look like a heart that has a normal amount of fat to you?
A. Yes.
Q. Normal.
A. Yes. Definitely.
Q. Okay. I'll take that back.
A. The amount of fat around the heart is variable. It doesn't reflect any impact on function or any impact on the suitability of the heart for being transplanted.
Q. I appreciate that. I didn't ask any questions about whether fat affects suitability

or whether fat affects function. I just asked you if that was a normal amount of fat in your opinion --
A. Normal.
Q. -- and you said it was.
A. Absolutely. Yes.
Q. Okay. Did you do predicted heart mass measurements on the recipient before you left Mayo to go get this heart?
A. Say --
Can you ask the question again?
Q. Yeah. Well let me ask a prefatory question first. Size match is an important part of finding a suitable donor heart; right?
A. Yes.
Q. You don't want the heart to be too big and you don't want the heart to be too small; right?
A. Yes.
Q. Do you have sort of a general guideline about how much bigger or how much smaller you're willing to go?
MR. BRANTINGHAM: Object to form.
A. The attending surgeon is the person who deals with that decision-making, not me.

Q. Okay. So the attending physician would give guidelines as to how much bigger or smaller he's willing to accept for the donor heart?

A. He knows in advance.

Q. Knows in advance what the parameters are going to be?

A. The echocardiogram.

Q. For the donor or for the recipient?

A. For both.

Q. Okay. So he knows in advance what size --

A. Yes.

Q. -- the heart's going to be.

A. Not only the echocardiogram, CT scan. CT.

Q. Sure. But there's a ruler in those photographs. Because one of the things that's your job --

A. Yes.

Q. -- is to verify the size of the heart; right?

A. To verify the size of the heart?

Q. Size of the donor heart.

A. No, that's not my -- my -- my -- I see, I evaluate the heart. The heart

has different sizes according to which donor it is. We just evaluate the heart in general terms. Of course, I agree that if the heart is enlarged, severely enlarged, there should be a problem and we should raise that issue.

Q. Address that issue?

A. If we see anything. Usually the -- the size of the heart comes with other things, it's not only the size. If you have a large heart with high pressures, filling pressures is one thing, and on top of that the size of the heart, they in different dimensions, varies according to the hemodynamic situation.

Q. Okay. My question to you was: Is evaluating the size of the heart part of your job as one of the procuring surgeons?

A. In part, yes, in the way that if I see any significant issue related to the size, I have to, you know, communicate that. Not me in this case. The primary surgeon has to do it.

Q. Do you remember that this was a big heart?

A. I remember it was not a big heart according to the donor, according to the donor's size.

Q. What do you mean "according to the donor size?"

A. I mean that if you have a donor -- a female donor of a height 157 and you have a heart that is severely enlarged for that donor, you have to raise the issue. But I am sure we will not be going in a run to procure a heart like that because we know the information in advance.

Q. How big were you expecting this donor heart to be since you remember it?

A. Yeah.

MR. BRANTINGHAM: Object to the form of the question.

A. I mean how big, what do you mean? You want me to tell you the centimeters from one side to the other, the height, all --

Q. How about the weight?

A. Huh?

Q. How about the weight?

A. The weight is related to the mass.

Q. Okay. How big were you expecting it to be?

A. I go for the echocardiogram before -- before the procurement. That give me much more

information that -- the visual assessment about the mass.

Q. My question -- my question is: How much were you expecting this heart to weigh? And if your answer is "I don't have any idea how much I was expecting the heart to weigh," then that's your answer.

MR. BRANTINGHAM: Object to the form of the question.

Q. But if you did have an expectation, I'd like to know.

MR. BRANTINGHAM: Go ahead and you can just answer that question.

A. I don't have the answer for that because, to my eyes and to my knowledge, this heart was within the normal limits for the donor and what we were, you know --

Q. "For the donor," you mean for the donor's size?

A. For the donor's size.

Q. How big was the donor?

A. I can't remember exactly the de -- the details.

Q. How about just in general?

A. Sorry?

Q. Not even exactly. You said you can't remember exactly. I don't expect you to remember it to the centimeter and to the kilogram. But how about just in general? How big were you -- how big was this donor?

A. I can't remember exactly. I have to go to the details.

Q. I'm not asking you exactly. You're claiming that you remember this heart, and you're claiming that based on your memory you can say "That heart was the size that I expected it to be." And then I asked you, "Well what size were you expecting it to be?", and you said, "Well I don't know, it would depend on the size of the donor." And now I'm asking you: How big was the donor?

A. Okay.

MR. BRANTINGHAM: Object to the form of the question.

A. I --

MR. BRANTINGHAM: Go ahead. You can answer.

A. My target is the heart. If I see the heart and I know in advance what the donor size is and I find the heart which is corresponding

and not raise my attention that the heart is abnormally big for the donor, I just pay attention to the heart and I know that.

Q. Uh-huh.

A. So I don't have to remember now exactly what the donor size was. I just remember that the heart was adequate --

Q. How --

A. -- based on -- on the donor.

Q. How much, doctor, would you expect a heart to weigh from a donor who's 180 centimeters tall and weighs 80 kilograms? Just roughly.

A. A hundred and what?

Q. A hundred and eighty-three centimeters tall and weighs 80 kilograms. How much should that heart weigh?

A. I can't say in -- I have to --

I should have to check details about weights of hearts.

Q. I mean just you can't even give me an estimate? Two hundred grams? Six hundred grams?

A. I can't say exactly.

Q. I'm not asking --

A. About four -- four, five hundred grams.

Q. I'm not asking -- I'm not asking exactly. How about closer to 200 grams or closer to 600 grams?

A. Closer to 600 grams.

Q. Closer to 600. You think that --

Okay. Do you know that UNOS has a predicted heart mass calculator that's readily available?

A. No, I'm not aware of that.

Q. Do you know what UNOS is?

A. Yes, I know.

Q. What's UNOS?

A. It's the organization that relates to the heart procurements and transplantation.

[redacted]

the heart mass at 192.46 grams, would you have any reason to disagree with that?

A. The heart weighs --

Q. Yeah.

A. -- 183?

Q. I'll just show it to you. This is from

the UNOS website.

A. Yeah.

Q. Is it standard at Mayo, do you know, for somebody to do a predicted heart mass calculation before you decide that an organ is of a suitable size for a patient? That's my first question.

A. Okay. Do that question again, please.

Q. Do you know if it is standard practice at the Mayo Clinic for somebody to do a predicted heart mass calculation before a decision is made that a heart is suitable for transplant?

A. The trans --

The attending surgeon is the person who does that.

Q. Okay. So your answer is yes, it is standard for somebody to do that calculation, and in my experience, the attending surgeon is the one who does it.

MR. BRANTINGHAM: Object to the form of the question.

A. The form of the question is not the way I should take it, because the attending surgeon will not be meticulously mathematically

calculating the mass or the weight or whatsoever. The attending surgeon, in my knowledge, although I am not doing that job, is going to calculate if that heart would fit and would be adequate for the recipient based on the chest structure, the -- inside the mediastinum cavity and things like that.

Q. Have you ever looked at Dr. Villavicencio's operative report from this case?

A. I have read that, yes.

Q. Do you know --

A. A long time ago. Yes.

Q. Do you know whether there was a significant size mismatch between the donor heart that you brought him and the space that he had in Noah Leopold's chest?

MR. BRANTINGHAM: Object to foundation.

A. I don't recall that.

Q. If I told you that Dr. Villavicencio documented that there was a significant size mismatch, would that surprise you?

MR. BRANTINGHAM: Foundation.

Q. Because you remember this heart run.

A. No, it doesn't --

MR. BRANTINGHAM: Hold on, hold on,

hold on. Let him answer the question you asked, please.

MR. THOMPSON: I'm going to ask my question the way that I want to ask it, so just --

MR. BRANTINGHAM: Are you withdrawing the first question you asked and then immediately --

MR. THOMPSON: Sure.

MR. BRANTINGHAM: -- started talking over?

MR. THOMPSON: Sure.

MR. BRANTINGHAM: Okay. So now ask him another question, please.

BY MR. THOMPSON:

Q. Given that you claim that you remember this heart and you claim that it was a perfectly appropriate size for this patient, would it surprise you to know that Dr. Villavicencio documented there was a significant size mismatch?

MR. BRANTINGHAM: Object to the --

A. I didn't say --

MR. BRANTINGHAM: Hold on, doctor. Let me just get -- make an objection. I'm going to

object to the form of the question and object to foundation, and now you can answer.

A. I didn't say that this heart was adequate size for the recipient. I did not say that. What I said is that this heart was adequate for transplantation to use functionally and structurally and anatomically.

Q. Okay. So --

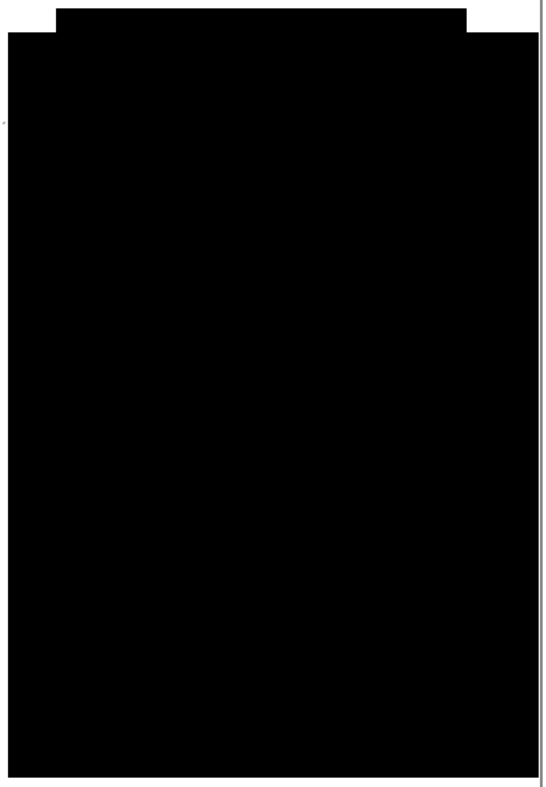
A. I didn't mention anything regarding the recipient. And -- and regarding your question, I should be surprised? I -- I shouldn't be surprised of anything.

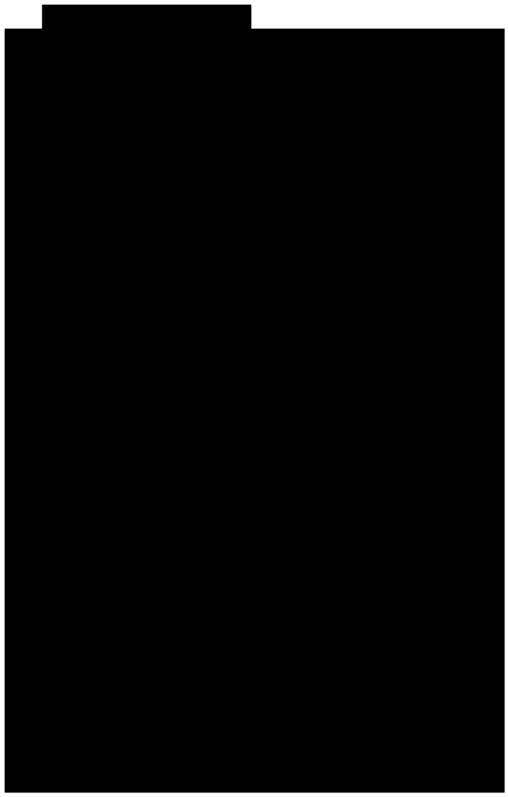
Q. All right. So now I got to clear this up. Is it part of your job to assess whether the heart is an appropriate size for the recipient or isn't it?

A. No.

[redacted]

[redacted]





Q. Great. So according to the UNOS calculator, if anybody had bothered to use it, what you would have been expecting to find when you flew to Idaho was a heart that was about 192 grams; right?

MR. BRANTINGHAM: Object to foundation.

A. I never go to any run -- no ones I -- that I know in my practice go to any run thinking about any kind of weight or mass or whatever.

Q. Sure. But you --

A. So you --

Q. -- have at least a general expectation that that heart is going to be a specific size; right? Because you know that that's part of your job, we got to make sure that this heart is a good size match for that recipient who is waiting for it back at Mayo; right?

MR. BRANTINGHAM: Object to the form of the question. You can answer.

A. Again, that decision is taken in

advance by the -- by the attending surgeon, and when we go there, we have to assess the heart specifically and give the report.

Q. Including the size?

A. Including if we see anything disproportionate regarding the structure of the heart, the make --

Q. I'm not asking you about -- doctor --

MR. BRANTINGHAM: Let him finish his answer.

MR. THOMPSON: I'm going to interrupt him if I want to interrupt him, because he's not answering my question and we're going to get answers to my questions.

THE WITNESS: Yes.

Q. I'm not asking you about structural abnormalities of the heart. I'm asking --

A. Well the size -- a bigger size than normal in a -- in a donor is a real structural modification.

Q. That you should be calling back and alerting the team at Mayo about, right, if it's there?

A. If it is a disproportionally bigger heart regarding the structure of the heart, the

anatomical structure of the heart.
Q. I'm sticking --
A. When the heart is failing, you have a gigantic bovine heart like this, you know.
Q. Doctor, --
A. Yes.
Q. -- you got to listen to my questions. I'm talking about size.
A. Yes.
Q. I'm talking about size.
A. I'm talking about size.
Q. Let's stick with size. Let's not stick with function. Let's not talk about function. Enough.
A. No. I'm talking about size.
Q. Great.
A. Structure. Structure. Not function. Size.
Q. So --
MR. BRANTINGHAM: Can we just take a moment here? So at the beginning of this you started by telling him that you weren't going to talk over each other. Right?
MR. THOMPSON: Stop. Stop.
MR. BRANTINGHAM: That's one of the

rules.
MR. THOMPSON: Stop.
MR. BRANTINGHAM: Is it your position --
MR. THOMPSON: Stop.
MR. BRANTINGHAM: -- that you get to interrupt the witness --
MR. THOMPSON: Yes.
MR. BRANTINGHAM: -- in the middle of his question?
MR. THOMPSON: Yes, --
MR. BRANTINGHAM: Okay.
MR. THOMPSON: -- it is. If he's not answering my questions, I --
MR. BRANTINGHAM: If he's --
If you decide he's not answering your question, you're going to shout him down and then shout other questions at him?
MR. THOMPSON: So I know that you don't agree with the way that I take depositions, but we've now been at this for three days. You know how I conduct a deposition.
MR. BRANTINGHAM: I sure do.
MR. THOMPSON: You don't have to like it. And when you take a deposition, you're

entitled to take the deposition however you want to.
MR. BRANTINGHAM: According to the rules.
MR. THOMPSON: We -- we have had this conversation enough times now.
MR. BRANTINGHAM: I agree.
MR. THOMPSON: Stop telling me how to conduct a deposition. If you have an objection, make it. I -- I don't want to have any more colloquy back and forth with you.
MR. BRANTINGHAM: Please show us all the respect to allow people to speak and finish their sentences.
MR. THOMPSON: Andrew --
MR. BRANTINGHAM: That's all I'm asking.
MR. THOMPSON: Andrew --
MR. BRANTINGHAM: It's very reasonable.
MR. THOMPSON: We are --
MR. BRANTINGHAM: Please proceed.
MR. THOMPSON: I am going to have answers to my questions, not to questions that I'm not being -- not that I'm not asking. And if he's not answering my question, I am going to

interrupt him and I'm going to redirect him to the question that I'm asking so that we can keep this day on track. And if you think that that's so abusive that you need to terminate the deposition, you know your remedy.
MR. BRANTINGHAM: Uh-huh.
MR. THOMPSON: We've been over this many times. Stop instructing me how to conduct a deposition.
MR. BRANTINGHAM: Please go ahead.
BY MR. THOMPSON:
Q. Sticking with size, is it part of your job to have at least a rough idea of what size to expect when you take the donor heart out?
A. Say -- say the question again.
Q. It's a very simple question. And if you don't understand my question --
A. No, no. I understand, but say that again for details.
Q. Okay.
A. Can you do that?
Q. If you don't understand my question, will you let me know?
A. Yes, I will let you know.
Q. Thank you.

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My question is: Is it part of your job to have at least a rough idea of what size heart to expect when you get to the donor site?

A. Yes.

Q. As for this heart, you have no recollection whatsoever as to even the rough size that you were expecting; isn't that true?

A. I did have idea because I saw -- I saw the echocardiogram, I've seen the CT scan, so I do have a rough idea about the size of the heart. Yes.

Q. But as for even roughly how much you would have expected that heart to weigh, you don't know; right?

A. Weight is not something that I care about. What I care is about other most important things that reflect function like, you know, width of the -- of the --

Let me finish. Because I'm --

Q. You've answered my question.

A. No. Yeah, yeah, yeah, but you -- you don't let me finish. You are trying to --

You know, the way you are moving your body, body language, don't allow me to finish. So please let me finish.

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Q. Doctor, you've answered my question. And --

A. I am answering your question. Let me finish.

Q. Doctor, you've answered my question.

A. I didn't finish.

Q. Doctor --

A. I didn't finish.

Q. Doctor, you've answered the question that I asked you. The question I asked you was as for what size -- what weight to expect, you didn't have any idea and you said the weight doesn't matter to me. So you've answered my --

A. No. The weight --

MR. BRANTINGHAM: Doctor --

A. The weight -- the weight itself isolated -- isolated is nothing that I am extremely worried. I'm more worried about the function, the width of the -- of the -- of the wall of the ventricle, especially the right ven -- the left ventricle. And based on that, I could suppose if the weight of the heart may be a problem -- may be a problem. I'm not concentrated or obsessed about the weight of the heart. I'm more obsessed and concentrated on

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the width of the wall of the left ventricle and the other chambers, or the size of the chambers, left atrium, left ventricle, right ventricle, right atrium, pressures in the -- in the pulmonary arteries and the -- and so on. So that reflects the most important things. Weight is a consequence of those things. If we have a normal heart regarding the width of the -- of the walls of the -- of the ventricle, I will not expect at all an overweight heart. And that is the crucial point, the technical point that is much more important of the isolated weight. I go to the more significant points.

Q. How thick were you expecting the left ventricular wall to be?

A. Posterior wall less than 1.1 millimeters.

Q. One point one millimeters?

A. Sorry. Sorry. One centimeter point one millimeter. Sorry.

Q. So left ventricular wall, you were expecting it to be less than 1.1 centimeters?

A. One point two centimeters are the maximum it should be.

Q. How about the septal wall?

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A. The septal wall I should be expecting less than 14 millimeters.

Q. So 1.4 centimeters.

A. Yes.

Q. How about the right ventricular wall?

A. The right ventricular wall usually is not relevant regarding the size unless you have a hypertrophic. Usually it is less than .7 millimeters. Normal is .5, .6.

Q. Do you know what the ventricular wall thickness was on this heart?

A. I don't recall exactly. I have to go back to the -- to the -- to the numbers.

Q. Okay. Well if it was 1.8 centimeters -- let me just get out a calculator -- that would be 67 percent larger than you would have expected.

A. One point six -- eight millimeters where?

MR. BRANTINGHAM: Wait for a question.

Q. Just --

You got to stick with me. My question's simple, and if you need to look at my calculator, you can. You told me that you would have expected the left ventricular wall to be

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1.2 centimeters at the most?
A. Where? In the posterior I mentioned.
Q. Well wherever the cardiac pathologist from the Mayo Clinic measured it. Would you assume --
A. No, no, no, no, no, no, no.
Q. Hold on.
A. No, no, no, no.
MR. BRANTINGHAM: Just hold on, doctor. Just let him get to an actual question here.
Q. You asked me --
Well I was answering your question.
A. Okay.
Q. You said where is the measurement.
A. Yes.
Q. Wherever the cardiac pathologist from the Mayo Clinic measured the wall. Now would you assume that a Mayo cardiac pathologist knows how to measure a ventricular wall?
MR. BRANTINGHAM: Object to the form and the foundation.
A. Okay.
Q. Yeah. I mean if your answer is "I have no idea whether they know how to" --
A. So you are telling --

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Q. Hold on. If you have --
MR. BRANTINGHAM: Ask a -- ask a question.
Q. I'm responding to your counsel's foundation objection.
If you have no idea whether the Mayo cardiac pathologists know how to measure the thickness of the ventricular wall, that's a fine answer, too.
MR. BRANTINGHAM: That's not the reason for the objection.
A. So let --
MR. BRANTINGHAM: Hold on, doctor. That's not the reason for the objection. If you want the objection explained, I'm happy to explain it.
Q. Go ahead, doctor.
A. Okay.
MR. BRANTINGHAM: You can answer the question, doctor.
A. So this is absolutely a basic thing. You are going to the point of the measurement of the Mayo pathologist. Are you?
Q. Yeah.
A. Okay. When did the Mayo pathologist did the measurement? Reply.
Q. Well presumably after the heart catastrophically --
A. Ah, that's it. That's the difference.
Q. No. Hold on. Let me --
MR. BRANTINGHAM: Just let him -- let him finish first. Let him finish, doctor. Let him finish.
Q. I'd like you -- I'd like you to now to let me finish --
MR. BRANTINGHAM: Yeah.
Q. -- responding to you.
The Mayo pathologist measured that heart when the heart that you and Dr. Altarabsheh brought back from Idaho, --
A. Yeah.
Q. -- and told them that this was a perfectly good heart, fell apart in his hands, --
A. Uh-huh.
Q. -- bled uncontrollably, had to be explanted from his body and led to the death of this 40-year-old man.
A. Can I speak now?
MR. BRANTINGHAM: No. That's not a

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question.
Q. Is that a -- is that a full enough answer to my question for you?
MR. BRANTINGHAM: That's --
Q. Is that a full enough answer to your question?
MR. BRANTINGHAM: Hang on a second.
A. No.
MR. BRANTINGHAM: So is that a real question for this witness, Brandon, or are you just harassing the witness?
MR. THOMPSON: Okay. Now -- you're right. We're going to go on to a question.
THE WITNESS: Okay.
Q. Okay.
A. I --
Q. Hold on. Hold on. We're going to go on --
MR. BRANTINGHAM: Just let him ask a question.
Q. We're going to go on to a question --
A. I mean if I -- if I cannot say anything --
MR. BRANTINGHAM: No, no, no. Doctor, just -- just --

A. This is a crucial --
MR. BRANTINGHAM: Hang on.
Q. Doctor --
A. This is a crucial point.
MR. BRANTINGHAM: Here's a suggestion --
A. It is a crucial point.
MR. BRANTINGHAM: Here's a suggestion. Why don't we -- we've been going for an hour. Your next witness is here.
MR. THOMPSON: Oh, we're going to be here a long time.
MR. BRANTINGHAM: I suggest we take a short break in that case and talk about what your expectations are for time, because you've got two more witnesses here today.
MR. THOMPSON: Yeah. I understand that. So we can go off the record.
THE WITNESS: Okay. Off the record.
(Recess taken from 10:06 a.m. to 10:15 a.m.)
THE VIDEOGRAPHER: We're on video.
THE REPORTER: We're on the record.
BY MR. THOMPSON:
Q. Doctor, I'm going to try really hard to

ask simple, straightforward questions. Will you let me know if you don't feel like you can give a simple answer to my question?
A. Right.
Q. Will you do that?
You have to answer my question.
A. Yes, I can -- I can give you --
Q. Will you let me know if you don't think that you can give a simple answer to what I think is a simple question?
A. Okay. I will.
Q. Okay. And will you try really hard to limit yourself to answering my questions and wait for me to ask then another question?
A. I will try, depending on the content.
Q. I appreciate that. And I'm going to try really hard for us to not get in a fight back a forth with one another, and I'm letting myself get into that, too, and it's not super productive.
A. It's part of the job.
Q. So --
A. I understand.
Q. All right. Let's shift gears and try to turn the temperature down here a little bit.

You said, towards the beginning of your deposition, that the reason that you were recruited here is because Mayo was trying to increase their transplant activity. Do you remember testifying to that?
A. That's my understanding. I cannot reassure them because it was not my -- that's what I heard that I understand.
Q. Got it. Are you talking about specifically trying to increase the heart transplant activity?
A. Heart and lung.
Q. Any idea why that would be?
A. I --
No ideas, but I -- I -- I assume that they -- they -- it's a big institution prepared -- it's number one in the world, so is prepared to, you know, to do more practices in -- to patients in several aspects.
Q. When you --
A. More -- more care.
Q. When you say "number one in the world," what do you mean, number one in the world in what?
A. That's what I read in the magazines is

number one in the world.
Q. Just in general?
A. In general. Yeah.
Q. Got it.
The heart transplant volume here at Mayo is actually quite a bit lower than many other institutions in the United States; is it not?
A. A bit lower, yeah. It shouldn't be significantly lower.
Q. Okay. And it's your understanding that Mayo is trying to increase that volume.
A. That's my understanding.
Q. Do you remember noticing anything about this heart, at any point during the transport, that would have made you think that doesn't look like the most robust heart?
A. No, I -- I don't remember anything at all that it didn't make it a good heart, robust or whatever. Yes.
Q. Do you have any recollections of what happened during the flight?
A. There is usually a table recorded of what happens during the flight.
Q. Yep. And we've got that.

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My question to you is: Do you have specific memories of anything that happened during the flight?

A. I do have specific memory that the flight was smooth, the transport of the heart was smooth in the way -- when I say "smooth" means that nothing within -- outside the normal limits happened.

Q. It was uneventful.

A. Sorry?

Q. Uneventful would maybe be another way of putting it.

A. You can call it like that, yes.

Q. There has been some indication in this case that you and Dr. Altarabsheh were sleeping for most of the flight. Do you remember that?

A. I don't remember that, but it happens.

Q. Wouldn't be unusual for you to be sleeping for most of one of these flights?

A. Say that again.

Q. It would not be unusual for you to be sleeping during most of one of these flights. Is that what you're saying?

A. It would not be unusual to be sleeping part of the flight. I shouldn't say the whole

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flight. Maybe for awhile, then I wake again, speak with the people, having some, you know, a drink or whatever.

Q. A drink like -- like a Coke?

A. Yeah. No wine, no.

Q. Probably not a wine.

A. No. There is no wine there. No, no. Only cola.

Q. Yeah. All right. Do you remember there being any conversations about the lactates while you were on the flight?

A. Not at all. I remember, as I said, it was smooth transport. I don't remember anything.

Q. Would it be typical for the OCS specialists to tell either you or Dr. Altarabsheh about the lactates during the flight?

A. If there is anything significant to communicate regarding lactates, for sure they would be, you know, telling us or warning us.

Q. Would a rising lactate be the sort of thing that would rise to the level of being significant enough to communicate it to you?

A. Depending the rising. Rising means

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compared to the last sample there may be a rising, but what kind of rising. A step rising and a trend continues in the stepping up, that means something. A raise of a lactate within the expected amount shouldn't be something that I could -- they may communicate or they may not.

Q. Understood.

What would be the expected amount for the lactate to rise?

A. It is the common practice if the lactate goes above five in a -- you know, and the trend is going up from there, it's not -- 5.01 is something that you have to be -- alert this heart is not going. If the step rise, the trend, continues going up, a problem. On top of that there is another consideration to take into account if the lactate has two samples, arterial and venous. If the heart is consuming lactate and not producing lactate, that's good.

Q. Yep.

A. If the heart is producing lactate and there is a step rise continues and consistent, that may put the balance against that that heart should be appropriate to be used.

Q. Understood.

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Once the airplane landed in Rochester, somebody had to alert the team back at Mayo that the plane was safely on the ground; right?

A. Yes.

Q. I assume that was not you.

A. No.

Q. Is there another assessment of the heart that's done at that point in time by you and/or Dr. Altarabsheh?

A. We assess the heart visually during the flight, at the end of the flight, in many occasions visually. The samples are taken by the tech. They let us know, as I said before, if there is anything of consideration. Usually anyway they take -- they tell us if we are, you know, awake, as you said. Oh, because we ask, usually, we ask what are the lactates, how are things going, any issues or whatever. There's another important point which is, you know, the aspect of that, what is the other, you know, parameters. So it's all in -- in a conjunction. It's not -- we don't have to focus on the -- only on the lactates.

Q. Do you remember going to the operating room at Mayo with this heart?

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A. Yes.
Q. What do you remember about that?
A. Getting into the OR, putting the machine in there. I mean not me, I mean technician being with the team there. And there -- there was nothing that I recall that was raising the attention of anything not going well.
Q. Were you still there --
Well who removes the heart from the OCS machine?
A. The attending surgeon or the fellow with the attending surgeon.
Q. Do you remember which of them did that in this case?
A. I don't remember. Usually -- usually the attending surgeon is there and the -- maybe the fellow assist or whatever.
Q. How could -- how could the attending surgeon or the fellow remove the heart from the OCS machine without breaking sterility?
A. Because the box is sterile inside. Where the heart is located in the box, the box is sterile. And the box is closed with a top, all is sterile inside the box.

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Q. Sure. The inside of the box is sterile, but help me understand this. So the machine gets wheeled into the operating room; right?
A. Yes.
Q. But the -- the machine doesn't go within the sterile field; does it?
A. No, no, no, no.
Q. Okay.
A. We --
Q. No. Just -- just answer my question. Sorry.
A. Yes.
Q. I'm going through this.
A. Yeah, yeah, yeah, yeah, yeah.
Q. So the machine is outside the sterile field.
A. Yeah.
Q. Somebody's got to get the heart out of the machine that is outside the sterile field; right?
A. Take the machine -- the heart out of the machine. Someone has to take out the heart -- they take the heart out of the machine, yes. That somebody is the attending surgeon,

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sterile, taking the heart, sterile, from the machine, taking in sterile condition to the back table, from the back table to -- or directly to the field.
Q. So the surgeon -- the attending surgeon comes out of the sterile field to the machine and then takes the heart out?
A. No. He's sterile. He's sterile moving in the OR.
Q. Yep.
A. You can be sterile moving in the OR.
Q. Uh-huh.
A. If no one touch you, whatever, you still sterile. And you can get -- the door -- the lid is open.
Q. Understood.
A. Everything's open. Someone opens for him.
Q. Yep.
A. The unsterile part someone opens for him, and he -- when the lid is open, he can touch -- the lid comes with a little thing around and the heart is exposed.
Q. I understand.
A. He can go and grab it, he or anyone.

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Q. Yep.
A. Anyone --
Q. Anyone else who's sterile.
A. Sterile.
Q. Yep.
A. I mean "anyone" means another surgeon. It wouldn't be anyone.
Q. Yep.
Who removes the heart physically? Because the heart itself is attached to the -- it's cannulated to the machine; right?
A. Yes.
Q. Does --
The attending surgeon decannulates it?
A. Yes.
Q. Are you usually there when that happens?
A. Not always, but oftentimes.
Q. Do you remember if you were there when this heart was decannulated from the machine?
A. I remember that I was there, yes.
Q. Do you remember the heart being ecchymotic?
A. Not -- I -- I --
Usually when the -- the door opens,

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the -- the attending surgeon goes close. I am at a distance. So fine details of the heart I cannot say about this heart or other hearts, fine detail. I have to be -- because I use glasses of my distance, I have to be in -- within the -- the distance of the glasses --

Q. Yep.

A. -- to make a proper testimony of any details that you are asking about.

Q. Understood.

So the answer to my question was "No, I didn't notice it was ecchymotic."

A. No, I didn't notice because I -- not -- not because I was at the distance and I saw it was not ecchymotic, I am not aware because I couldn't have the ability --

Q. Yep.

A. -- to see details.

Q. Understood.

I'm showing you page 1879 of the medical record. This is a note from Dr. Rosenbaum.

A. Yeah.

Q. And I'm going to read this to you and then ask you a question about it. "An

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intra-myocardial hematoma was appreciated as the heart was supported on OCS." Do you see what I just read?

A. Yes.

Q. Did you appreciate an intra-myocardial hematoma while the heart was being supported on OCS?

A. No, I don't. I didn't.

Q. Do you have any explanation for --

A. Yes.

Q. -- that passage in the medical record?

A. I have a --

MR. BRANTINGHAM: Object to foundation.

A. This phrase was written by Dr. --

Q. Rosenbaum.

A. -- Rosenbaum. Dr. Rosenbaum was not there.

Q. Yep.

A. Dr. Rosenbaum is a cardiologist. Dr. Rosenbaum may write notes based on what he believes or he heard or what he was told or whatever. So this question has to go to Dr. Rosenbaum, not to me.

Q. Yep.

A. I haven't seen any --

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For sure I didn't appreciate any hematoma or significant hematoma because I saw the heart through the box. It is transparent, although it's not perfect, because you have to open the lid, open the little thing that is around, and then have a look in detail to the heart. But for sure there was not a significant hematoma, so you have to ask Dr. Rosenbaum that question.

Q. Understood.

All right. At some point you obviously left the operating room; right?

A. Yeah.

Q. Do you remember at what point in the procedure you would have left the operating room?

A. Yes. Not exactly, but very soon after the heart went to the field, so --

Q. Because at that point your job's done.

A. In certain way, yes. If I want to stay, I can stay. If I want to scrub in the case, I can. But not in this case, I -- I opted not to.

Q. Uh-huh. Pretty late at night and you probably wanted to go home and go to bed, I'm

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guessing.

A. Yes. Most of the times that's what we do.

Q. Yep.

Okay. At some point you found out that that heart that you had brought from Idaho had not been able to be transplanted; right?

A. Say that again. Sorry.

Q. At some point in time you found out that that heart that you had brought back from Idaho was not able to be successfully transplanted; right?

A. Well we saw the final result.

Q. You were contacted by Dr. Villavicencio or somebody else in the operating room while the case was still going on; right?

A. You mean after I left?

Q. Yeah.

A. No. I was --

I don't recall to be -- being contacted by Dr. Villavicencio or someone else.

Q. You don't recall anybody contacting you while the case was still going on and asking you questions about the lactate?

A. I don't recall any.

Q. You're aware that there are a series of text messages that indicate that that is exactly what happened; right?

A. I'm not aware of those texts.

Q. Okay. You --

You've never heard anything about any text messages in this case?

A. No, I didn't.

Q. Okay. There are text messages in this case that indicate that either you or Dr. Altarabsheh or both of you told Dr. Villavicencio that the lactates were either bad or terrible. Is this the first you're hearing of that?

A. This is the first time I'm hearing that, --

Q. Okay.

A. -- because they were not.

Q. So as for how somebody would have gotten the idea that the surgeons, being you and Dr. Altarabsheh, were telling V that the lactates were terrible, you have no idea where they would have come up with that.

A. I have no idea and I -- I challenge that. But that word "terrible" is absolutely

unacceptable. I mean terrible is something that is terrible, and that -- no.

Q. Well that's probably somebody's interpretation. But the point is, you don't remember getting any contact whatsoever while this case was still going on.

A. No.

Q. When is the next time you can recall having any contact about Noah Leopold's case?

A. Contact whom with?

Q. From anybody. From the time you --

You left the operating room on the early morning hours of the 30th after you had delivered this heart. You don't remember for sure what you did, but you probably went home and went to bed because it was the middle of the night.

A. Yeah. Yeah, yeah.

Q. When's --

When did you find out that --

A. Well --

Q. -- things hadn't gone as expected?

A. Usually, I don't recall exactly on this case, but usually we make comments with my colleague Salah about how the cases from the day

before are going on.

Q. I --

A. And also we follow the cases on the Epic.

Q. When is the first time you can say definitively that you found out that this case didn't go as planned?

A. The day after.

Q. The day after being later that same day, or the day after being in that --

It was the early morning hours of the 30th. Was it later on the 30th or not until the 31st?

A. No, no. Later when I --

Usually I -- I go to Mayo the day after. I mean day after. If it is late at night, I go to bed, but then I go to Mayo.

Q. Later that same day.

A. Later that same day.

Q. And at --

And you found out later that same day that things hadn't gone as planned with this case.

A. Yes.

Q. How did you find that out?

A. I lamented that, of course.

Q. Well no, no, no.

Who told you?

A. No. I go to the Epic. Epic is the record.

Q. The electronic medical record.

So nobody contacted you. You found out that --

The next thing that you can remember finding out about this heart was when you went on Epic and did what?

A. I usually check the patients, and I checked this one as well.

Q. What would you have looked at?

A. I look at the op -- op notes. I look at the -- the reports from the cardiologist, the transplant team, or the intensive care people.

Q. Is it your testimony that you actually remember looking at the operative note from this case later on in the day on the 30th?

A. I think so, yes.

Q. And what did you learn?

A. Sorry. What did I --

Q. What did you learn when you looked at the operative report?

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A. On this case?
Q. Yeah.
A. What I learned? What I learned on this case?
Q. Yes.
A. I learned that this disgraceful event is the first that I heard happen in the world and is the probably, no -- probably, no -- should say in my understanding, no one knows about this event happening anywhere, anyplace. And the reason why I say that is because in Prague there was a, you know, you -- there was a transplant meeting, it's a well-known transplant meeting that takes once a year, and there were -- it came the opportunity that I raised my voice. Went to the -- with a microphone in the middle of a big audience, big audience with the most remarkable surgeons in the world, cardiologists and so on in the transplant community, and I made a comment about this case. Of course, I -- it was shortened, the explanations, but highlighting that the -- the procurement, transport, OCS run and so on, and the timings on the OCS and so on and so on have been uneventful, and what happened next. And I

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asked specifically, to that big audience, did anyone at all heard about something like this happening and if anyone can give any inputs about what would be the reason for this to happen. And their reply to that was silence. There was no one commenting anything. And after seconds of silence, the chair said, "Okay. Based on that, there is no comments on that. Let's go for another topic."
Q. Would I be correct in assuming then that you don't have an explanation for what happened --
A. No.
Q. -- in this operating room?
A. No.
Q. Do you even have speculation about what may have happened?
A. I don't.
Q. We know that the heart got to the operating room at about 3:00 o'clock in the morning, and you said that you would have probably went home and went to bed.
When do you think you would have come back to the hospital?
A. I can't remember that day what time,

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but usually maybe before midday.
Q. Uh-huh.
And -- and again, you're pretty sure that you read the operative report that day.
A. Not very sure about the op report. But there -- there may be something I read about that or --
Sometimes the op -- the operating notes are not written immediately.
Q. Yeah.
A. I don't remember if I -- it was immediately when I arrived that I went to the op note, but there -- there is another part of the op note that is written quickly, which is the brief -- brief op note.
Q. Uh-huh.
A. That usually is always written.
Q. Okay. And you think that that would have been available by midday on the --
A. No. I'm not saying midday, because I don't know if I -- meaning when I arrive I immediately went to Epic. Maybe I was still -- 6:00 o'clock p.m. or 8:00 o'clock or whatever before I left home -- to home I went to Epic. I don't recall that.

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Q. Uh-huh.
Can you recall ever talking to Dr. Villavicencio about this case?
A. No.
Q. Do you think you did and you just can't remember details, or you don't think you've ever talked to him about it?
A. I don't remember talking about this case specifically. We -- I --
I remember hearing talks about chats about what happened, what -- what are the next steps, not specifically what happened in this event. I mean what happened afterwards with the, you know, tot -- the support that the patient had in after the -- the heart was taken out, you know, that kind of support that the patient had. That's all complicated.
Q. Can you recall talking with either Dr. Spencer or Dr. Daly or any other --
A. No.
Q. -- surgeons about this case?
A. No. No. I don't recall.
Q. So help me understand that. The --
What happened here was very unusual and surprising; right?

A. Yes.

Q. Don't the surgeons in the Cardiac Surgery Department at the Mayo Clinic want to take steps to improve patient outcomes?

A. They -- they do.

Q. But you're telling me that after this incredible, catastrophic, unforeseen -- never-before-seen event happened, you can't recall ever talking to a single one of the surgeons at the Mayo Clinic about it?

MR. BRANTINGHAM: I'm just going to interpose an objection insofar as the question seems to ask about peer review, which is of course protected.

MR. THOMPSON: Well he said that he never talked to anybody.

MR. BRANTINGHAM: I understand. But the kind of windup to the --

If you're just asking him about his conversations, fine. The wind -- insofar as the windup talked about improving patient safety and so forth, that's talking about peer review. So it's a different topic, I think.

In any event, --

MR. THOMPSON: Sure.

MR. BRANTINGHAM: -- go ahead and ask about his conversations.

Q. Yeah. So --

A. Usually the -- the cases are discussed in the morbidity and mortality cases.

Q. We're not going to talk about that though.

A. But --

Q. Because he -- he doesn't want you to talk about that.

MR. BRANTINGHAM: Yeah. And you -- you can't talk about --

You can -- I mean whether that happened or not, but you -- don't talk about any of the content of the morbidity and mortality.

Q. Let me -- let me re -- kind of redirect us with a different question.

If Dr. Villavicencio or Dr. Daly or Dr. Spencer or literally anyone else at the Mayo Clinic did anything to try to figure out what happened here, they didn't come and talk to you about it; is that right?

A. They didn't come to talk to me?

Q. Yeah. Literally nobody from Mayo came to talk with you about this case as part of

trying to figure out what happened. Am I understanding you correctly?

A. I don't recall anyone to come to -- to talk to me specifically. I don't recall. That doesn't mean it didn't happen. Maybe it happened.

Q. Well given the fact that you remember the way this heart looked a year after the fact, don't you think that having a conversation about this unbelievably rare event would be something that would stick out in your excellent memory?

MR. BRANTINGHAM: Object to the form of the question. You can answer.

A. I had, you know, chats with different physicians, but I can't recall whom with. So it's possible that I may have had any conversation with any of -- any one of the team. What I mean when -- when I was to answer your specific question, I was directed to a specific meeting regarding this matter and analyze this matter. I don't recall that happening. But brief communications, questions, thoughts, inputs, it may have happened and I don't recall.

Q. Understood.

You are involved in research right now

involving design of a heart box like OCS from TransMedics? I read that in your CV. Tell me what that means.

A. Yes. We were trying to explore a field which is beating-heart transplantation. That has already been achieved by Stanford. Because that was achieved and, you know, demonstrated already in the last congress in AATS, we decreased our, you know, enthusiasm on that.

Q. Understood.

A. I was, you know, en -- you know, encouraged to do that, but someone anticipated, unfortunately.

Q. They beat you to the punch.

A. Yeah.

Q. One of the --

A. And I was very sad about that. Yeah.

Q. One of the things listed in your ongoing research is epicardial ultrasound evaluation of heart donors during procurement in DBD donors.

A. Yes.

Q. Is that ongoing research?

A. It has been ongoing. We stopped and we are going to restart again.

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Q. Did you perform an epicardial ultrasound evaluation on the donor in Idaho that you went to procure?
A. No, we didn't.
Q. Why not?
A. Because the -- at that time the research was on hold.
Q. What is the -- what is the hoped-for benefit of doing epicardial ultrasound evaluation of those donors?
A. The hope should be to assess a heart that you can find a different picture that you were expected to find beforehand and see if there is anything that you can change or do at the time of the procurement.
Q. Anything --
Try to pick up on things that maybe were not seen on the ultrasound -- or the echo that was done by the donation facility?
A. Not -- not precisely.
Q. Okay.
A. Meaning that the heart function, hemodynamics -- not the heart itself, the hemodynamics that impact on the heart may change and what is the consequence of that.

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Q. When did that --
A. But if you see nothing, I don't personally see any advantage of doing that.
Q. When did that research start?
A. When it started?
Q. Yeah.
A. About October '22.
Q. And then --
A. About that.
Q. And then it was suspended?
A. Temporarily. Because it was -- it was promoted by a colleague of mine. I was after him, join him, but it was not my initial research.
Q. When was it suspended?
A. It was about probably March.
Q. Of '23?
A. '23.
Q. Why was it suspended?
A. Because the colleague left and the enthusiasm decreased because of that.
Q. When did it restart?
A. Probably we are starting soon.
Q. Oh, you're going to restart it.
A. Yes.

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Q. Are you going to head that up?
A. Yes, myself.
Q. All right.
A. And -- and my colleagues as well.
Q. Sure. And obviously you think there --
You must think there could be some benefit to that or else you wouldn't be restarting the research.
A. There may be some benefit in the cases that you are in a situation where the heart is -- looks not ideal at the time of procurement and you may have -- you know, you may find things that you can correct at that precise time and convert that heart in a heart that you expect that would be okay.
Q. Do you remember having any conversations with Michael Pick about this case other -- after you got off the airplane?
A. No.
Q. Can you remember ever having any conversations about this case with Alex Reynolds?
A. With?
Q. Alex Reynolds.
A. Maybe that I requested the details of

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this run.
Q. The --
A. The details of the run, meaning times of instrumentation, cross-clamp times, ischemic times and so on.
Q. The flows, the pressures, the lactates, things like that.
A. Anything of significance.
Q. All right.
A. Probably I met him, yes. Probably. Because he's the person who collects all the information.
Q. There was initially a concern that the bleeding episode that happened with this heart in the operating room was caused by microperforations that resulted when the heart was put on the OCS machine. Do you know that?
MR. BRANTINGHAM: Foundation.
A. I'm not aware of anyone who would -- with commonsense to say that with any proof or any -- any kind of a, you know --
Who said that?
Q. Dr. Villavicencio in his operative report.
A. What did he say?

Q. He says at one point, "We thought the only way to control the bleeding" -- this is on 2132 -- "thought the only way to control the bleeding was to give protamine and blood products since we thought the bleeding came from microscopic tears from the aortic root perfusion in the OCS." First of all, is that the first that you're hearing of that? I thought you read the operative report, but maybe you missed that part of it.

A. Well I don't recall that part exactly, but what I say, that is a personal, subjective opinion that may potentially be consistent with a possibility. But microscopically, I can give testimony that there were no issues at the time we instrumented and we put the heart in the OCS, any kind of perforations or whatever.

Q. Can you explain physiologically to me how microscopic tears from the aortic root perfusion on the OCS would lead to the sort of widespread intramyocardial bleeding that he's talking about?

A. No, I cannot.

MR. BRANTINGHAM: I was going to object to foundation, but that's fine.

Q. Okay. Oh, last question.

Do you have stock in TransMedics?

A. No, I don't.

Q. Okay.

A. Hopefully I should have it, but I don't.

Q. Maybe you should, maybe you shouldn't. I don't know.

A. Yeah.

MR. THOMPSON: All right. I don't have any other questions. Thank you, doctor.

EXAMINATION

BY MR. BRANTINGHAM:

Q. Doctor, I just have one question.

You were asked some questions about heart measurements by the Mayo pathologist and there was something you wanted to explain about the pathologist's measurements. Could you just explain what you wanted to explain?

A. Yes. Going back to that part of the interrogation in which you stated that the pathologist mentioned that the width of the wall of the heart was more -- 18 or more -- or more, and I said that the normality was the other size, so it was 60 percent more or whatever. I

have to highlight that it is a crucial difference between the heart that was on the OCS at the time of procurement, during transportation, and even after -- at the time of taking the heart out of the box, regarding whatever sizes may have been measured at that time and the sizes of what had been measured after the event. And the reason is in some way quite simple. We all know what happened. We all know that there were big hematomas and bleeding or whatever. Why it happened, we don't know, but that occurrence change absolutely everything. And the heart was studied by the pathologist obviously after all this happened, so there is no way -- no way, by my understanding, to assume that those measurements were present at the time that the heart was on the OCS, or even taken out from the OCS and going to the field.

MR. BRANTINGHAM: That's my only question. Thank you.

EXAMINATION

BY MR. THOMPSON:

Q. So with respect to that, I think what you're saying is we just don't know one way or

another, it's kind of a different heart after this whole event happens. Is that what you're saying?

A. Say that again. Sorry.

Q. I think what you're saying is the heart that you put on the machine and the heart that was dissected on pathology after it went through an OCS run and it had an attempted transplant, and it bled, and it got protamine, and it got blood products and all that kind of stuff, it was a very -- two very different hearts --

A. Yes.

Q. -- in a sense.

A. Yes.

Q. How would the bleeding cause the ventricle wall to increase in thickness by 66 percent?

A. I don't have that answer. If I should have that, the real -- the molecular -- the real cause of that, I should, you know, aim to tell to the scientific society. But I -- I don't know. And no -- unfortunately I don't think anyone can know exactly for sure because -- that's my feeling. And I raise the question in the congress and no one could say anything.

Q. And I want to make sure we're on the same page about that. It very well could be that the ventricle wall was 1.8 centimeters when you put the heart on OCS. What -- all you're saying is you can't use this pathology to say that definitively because we don't know what happened to the thickness of the ventricle wall after the heart went through everything it went through. Is that fair?

A. No. It will not --

It's not correct to say it wouldn't be that when we put the heart it was 18, or we -- we took out it was 18, it wouldn't be. The heart was not on those sizes, otherwise we should be aware of the, you know, the different size hematomas, ed -- gross edema, whatever happened afterwards. It was after the implantation and after whatever happened in the op note that I -- I just -- I am in the same situation that probably all these people who are -- are reading the op notes. So I read the op notes and I haven't been there, I cannot say.

Q. Is it typical for hearts that are transported on OCS to be more edematous at the end of the run?

A. I shouldn't call it typical. What I could say is the longest the run is, the -- the more is the chance to get some sort of myocardial edema. Indeterminate. It may not be, may not -- it may be significant. There are many aspects. But the shorter it is, or within -- I should say more than six hours if I expect some edema? Yes, I should expect some edema. That edema may impact in the function of the heart, I don't know.

MR. THOMPSON: Okay. I don't have any other questions. Thank you.

MR. BRANTINGHAM: No more questions from me. We will read and sign.

THE REPORTER: Okay. Thank you. Off the record.

(Deposition concluded at 11:00 a.m.)

C E R T I F I C A T E

I, Nicole A. Huber, hereby certify that I am qualified as a verbatim shorthand reporter; that I took in stenographic shorthand the testimony of GUSTAVO KNOP at the time and place aforesaid; and that the foregoing transcript consisting of 95 pages is a true and correct, full and complete transcription of said shorthand notes, to the best of my ability.

Dated at Baxter, Minnesota, this 21st of August, 2024.

NICOLE A. HUBER
Notary Public

S I G N A T U R E P A G E

I, GUSTAVO KNOP, the deponent, hereby certify that I have read the foregoing transcript, consisting of 95 pages, and that said transcript is a true and correct, full and complete transcription of my deposition, except per the attached corrections, if any.

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WITNESS MY HAND AND SEAL this _____ day of _____, 2024.

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